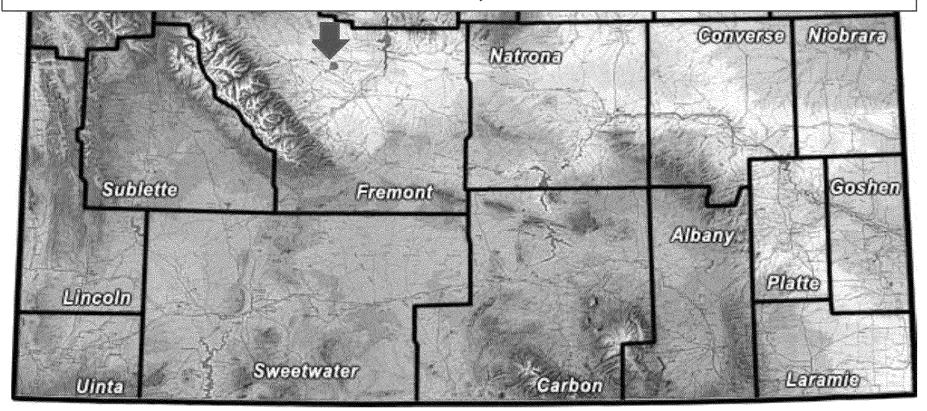


IOGCC MINYEARG MEETING VANCOUVER, BC ENVIRONMENTAL COMMITTEE UPDATE ON PAVILLION, WYOMING June 4, 2012



WHAT IS ALL THE CONTROVERSY REGARDING THE EPA DRAPAVILLION FIELD INVESTIGATION REPORTECUTIVE Summary

The report was issued by EPA with incomplete, immedequate, political science; before the data was reviewed by Wyoming dgeacies, as befor verified by further testing; before the data was peetred retirangly process; and before all data was provided.

The report does not address the original complaint wells watish shaped taste and odor but erroneously concludes that a ktaeraidad used in fracturing caused groundwater contamination and ignortestialthecauses of contamination including those introduced by EPA itself.

Pavillion Natural Gas Field Wind River Basin Fremont County Wyoming

- Approximately 5 miles real Gast of the Tover of Pavillion in the center of the Wind River Reservation
- Area of Concern approximately 5 ¼析政協 E4 miles NS□ 라
 - 168 natural gas wellbores, 100 producer
 - 5 public, 37 domestic and 4 stock warpit monitoring wells and 2 EPA monitoring

Town of Pavilli

Thomas E. Doll State Oil and Gas Supervisor

The Town of Pavillion water supply wells are completed in the Wind River Formation, the same formation that is the aquifer and the natural gas reservoir

Town offavillion

- The EPA made public the Pavillion Draft Report comembanoun 2011 Water Last data provided was on January 31, 2012 tomortyne ateveHouse EPA Subcommittee on Energy and the Environment.
- EPA concluded that contamination of groundwater wchemicalsediseby a in hydraulic fracturing ased solely on a single detect in a single mon
- Due to unanswered questions by EPA on the dat**g wed**s, that at monitor agency and industry experts cannot make any condusions regarding groundwater contamination based on the monitoring ideal byta EPP cov

State agency scientists contend that the organic chemicaletecoecow were introduced by EPA into the monitoring wellner, dooring letitoen, dril testing, sampling and laboratory analyses.

• EPA's conclusion erroneously escalates the local Rewiltiem destaun to the national and international level which further obsidility for possic understanding. The quality of the debate continues to EPA uffsoriena itself is questioned.

- The EPA conceptual scientific model, lines of reals.csinomg, founds don the report and released to the public <u>tievo</u> besettoriong wells a<u>trolo</u> sampling events.
- The laboratory analyses resulted single detect of a single chemical cout of 9 samples analyte (2thanol.
- This detect was in only one of the two monitoring. wells sampled
- Actual sample levels for organics are so low the parter e peneabilities. in the compound detected is acceptable for public water system.
- EPA linked but by ethanol to hydraulic fracturing solely on their review Material Safety Data Sheets of chemicals that yduddlicbe fracteding in h.
- The last well stimulation performed on any natoxiahitygasto welle in EPAp monitoring wells was performed in 2005.

- Draft report was issued before all data is distilised analysis the assci completed ¬a 卍はservice to the public, specifically the invitividuathe living Pavillion natural gas field area who are looksingte toagendiesal found answers to their groundwater concerns regarding destileing and atendort
- The EPA draft regrootes historical USGS that shows the shallow dome and stock water wells in the Pavillion nationally have curringhigh sodium, his sulfate, high iron and high carbonate ionic content, prombuces ometuwally occurring biogenic methane gas. EPA ignored eithe iron attempt we disregarding its sampling or analysis and therefore on discounting on tributor to odor or taste.
- Landowners and groundwater users have known of theseissgesunbungter before any natural gas wells were drilled in downers remove for into lan the Pavillion natural gas field years after the wateraldriges. well
- EPA provide<u>no evidenc</u>ehat the two monitoring wells represent water wells used by anyone in the Pavillion natural gas field.

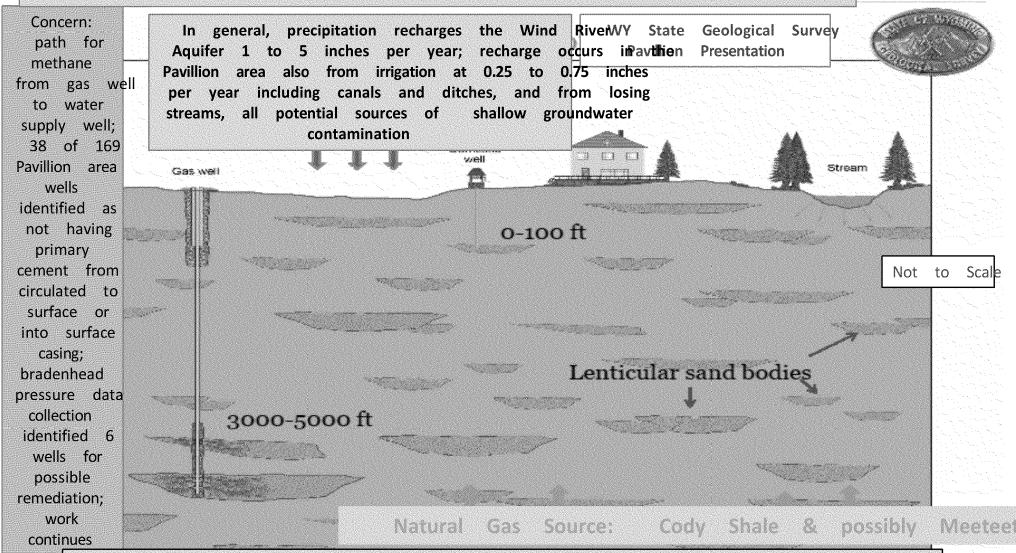


Not all

Wyoming Oil and Gas Conservation

Thomas E. Doll State Oil and Gas Supervisor

Concern: oil field sites contributed to shallow tagriouantidurater 10 on sites soil sampled of 32 sites identified as landowner concern; 1 site to DEQ MARCITEDES LANDOUS 12 to b



lenticular sands are charged with natural, gaomesoane aconnected, some

are

- The <u>report ignores the public out</u>erfeeth established with 4 Working Gr meetings held during 2011. Working Groups study Mategratly Gand Wel Landowner Identified Sites and are comprised of frepresentatives and state agencies, area landowners, and the natural orgas well operat
 - Work of Well Integrity continues after bradenhead testing 34 well identified 6 that require additional research and integrible remed
 - Identified Sites Teavill finalize findings after 33 sites were investigated, and with one site added to the ongoing tarted managed \nabla Remediation Program and to work toward issuing their report.
- Other possible sources of groundwater contamination disordain inunstrue area located within the Pavillion natural gas field:
 - from the drilling, completion, and maintenance of ndthestodomestic a water supply wells;
 - from the active and inactive septic systems, stdoks; pens and fee
 - from the current and historic public and private landfills;
 - from the use of pesticides, fertilizers, and herbijoiches amulifersubs recharge from irrigation of the Gor
 - from fuel stations and vehicle repair shops near laupplynewellsate

The EPA draft report contains questionable, unverified dataor qual

State agency experts cannot support the EPA's analysi conclusions as to the identification of any source of grant contamination based on the water supply well and monitoring sampling and testing data or the draft report.

• State agency scientists contend that the organic chemicaletecoecowo were introduced by Edwring the drilling, completion, testing, sampling a laboratory analyses.

Long term science based efforts are being planfiedWybymintge that the Tribes, the USGS, and EPA for the Pavillion as each. efficient switchice utilize proven and repeatable science, along with critical full full disclosure, and will lead to thoughtful conclusions water outin growend Pavillion area.

- During week of April 16, 2012 Monitor Well 2uce(970by fe EP)A was precovering tubular volume and then was sampled. WSGS Modicitonot sam Well 2 as their sampling volume protocol cannow bleid mentfluctuein to this well. EPA also sampled a select few private water supply wells.
- During week of April 23, 2012 Monitoring Wellroduce(d'90by feEf)A. was Tests of produced well water started at pH 120.6andon drapposchstatot pH decline. Wind River formation water pH rangess ftom natural 12as acrofield. Both EPA and USGS sampled the production water. EPA left USGS pulled production equipment from Monitor Well af dapring 30 yeek 2012. USGS ran a downhole camera, then ran ra appdessured transduce bailer in an attempt to recover formation fluidty wateldeperoduction to be insufficient to meet USGS sample recovery volumeamplestocowere N

Laboratory results are anticipated at time of PeerfalRevalue. Panel,

taken by USGS.











Thomas E. Doll State Oil and Gas Supervisor

Pavillion Working Group information

public and is posted on the webpage

The Wyoming Oil & Gas Conservation Commission webpage provides transparency for all records, reports: click "Completions", enter dates a operator, and select pdf ico under the **Completions** column

Thank you.

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